

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
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 115 120 125

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 130 135 140

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 165 170 175

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 180 185 190

Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa
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Gly Asp Trp Lys Xaa Xaa Phe Thr
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<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

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Lys Asp Glu Leu

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<210> 3

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<212> PRT

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<223> Description of Artificial Sequence: Synthetic peptide

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His Asp Glu Leu
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<223> Variable amino acid

<220>
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<212> DNA
<213> Artificial Sequence

<220>
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<220>
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<220>
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<223> inosine

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24

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<211> 27

<212> DNA

<213> Artificial Sequence

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<222> (10)

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<220>

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<222> (10)

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<220>

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<223> inosine

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<223> inosine

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yttccartcn ccnnnnnnnnc cyttngc

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<210> 8

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<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer

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<210> 11

<211> 32

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: Primer

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32

<210> 12

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<213> Artificial Sequence

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5

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<213> Zostera marina
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Thr	Arg	Gly	Ile	Thr	Gly	Ile	Ala	Val	Ala	Cys		Leu	Pro	Leu	Ile	
1				5					10						15	
atg	gct	gga	att	tta	gct	ttg	gag	aaa	tgt	ttc	gga	tcc	aag	aat	gag	96
Met	Ala	Gly	Ile	Leu	Ala	Leu	Glu	Lys	Cys	Phe	Gly	Ser	Lys	Asn	Glu	
				20					25					30		

caa gag aag gaa gaa gat tcc aaa atg tac aag aga tat aga gag att	144
Gln Glu Lys Glu Glu Asp Ser Lys Met Tyr Lys Arg Tyr Arg Glu Ile	
35 40 45	
gtt tct tca ctt ccc tcg aat gat tat tgg ggg gat acc atg agg ttg	192
Val Ser Ser Leu Pro Ser Asn Asp Tyr Trp Gly Asp Thr Met Arg Leu	
50 55 60	
tac aag gga ttt tgg caa atg gga tat ctt gta cct ggt atc atg gct	240
Tyr Lys Gly Phe Trp Gln Met Gly Tyr Leu Val Pro Gly Ile Met Ala	
65 70 75	
ttc gaa gat aat ttc aag gct cga gag acg gac att atc ctt acg act	288
Phe Glu Asp Asn Phe Lys Ala Arg Glu Thr Asp Ile Ile Leu Thr Thr	
80 85 90 95	
ctt cca aag gct gga acg aca tgg acg aag gca ctg acg ttt gcc atc	336
Leu Pro Lys Ala Gly Thr Thr Trp Thr Lys Ala Leu Thr Phe Ala Ile	
100 105 110	
cta aca cga gat gtt aac cac cca tca tca ccg aca cat cca ctt ttg	384
Leu Thr Arg Asp Val Asn His Pro Ser Ser Pro Thr His Pro Leu Leu	
115 120 125	
ttc ttc aac cct cat tcg tgt gtt caa aat ttg gag tat ttg tac atg	432
Phe Phe Asn Pro His Ser Cys Val Gln Asn Leu Glu Tyr Leu Tyr Met	
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ggt aga gaa aat acg atg cca gac ctc gat atg ttg aat gaa tcg ccg	480
Gly Arg Glu Asn Thr Met Pro Asp Leu Asp Met Leu Asn Glu Ser Pro	
145 150 155	
agg ttg ttt gcc gga cac atc cca tac tct ttg ttg ccg gcg tct gtt	528
Arg Leu Phe Ala Gly His Ile Pro Tyr Ser Leu Leu Pro Ala Ser Val	
160 165 170 175	
ttg aaa tcg gga aca aaa atc atc aat ata agc cgc aac cgt aag agt	576
Leu Lys Ser Gly Thr Lys Ile Ile Asn Ile Ser Arg Asn Arg Lys Ser	
180 185 190	
aca ttt gtg tct ttt tgg aaa ttt ggc aat ctg att aac ccc gac aag	624
Thr Phe Val Ser Phe Trp Lys Phe Gly Asn Leu Ile Asn Pro Asp Lys	
195 200 205	
tta ttg gac ctc gaa aag agc gtt gat atc ttc gca tcg gga atc tcc	672
Leu Leu Asp Leu Glu Lys Ser Val Asp Ile Phe Ala Ser Gly Ile Ser	
210 215 220	
ttt tgt gga ccg gaa tgg aat ttc caa gcg gag ttc acc aat gcg gcg	720
Phe Cys Gly Pro Glu Trp Asn Phe Gln Ala Glu Phe Thr Asn Ala Ala	
225 230 235	
tct act aat tca aac ttg cta ttg ttg agt tac gaa gaa atg tta gag	768
Ser Thr Asn Ser Asn Leu Leu Leu Leu Ser Tyr Glu Glu Met Leu Glu	
240 245 250 255	

aag cca gtt gaa aat gtg aag aag cta gct gag ttc atg gga tgt ggg 816
 Lys Pro Val Glu Asn Val Lys Lys Leu Ala Glu Phe Met Gly Cys Gly
 260 265 270

ttc aca gac gat gag gag aaa caa ggg att gtt gat gag ata gtt aaa 864
 Phe Thr Asp Asp Glu Glu Lys Gln Gly Ile Val Asp Glu Ile Val Lys
 275 280 285

ctt tgt agc ttc gac aat ctg aag aat caa cag gtg aac aaa aac gga 912
 Leu Cys Ser Phe Asp Asn Leu Lys Asn Gln Gln Val Asn Lys Asn Gly
 290 295 300

tca agc tac aat tcg aaa atc gac aac aag cat ttc ttc agg aaa ggt 960
 Ser Ser Tyr Asn Ser Lys Ile Asp Asn Lys His Phe Phe Arg Lys Gly
 305 310 315

gag gtg aga gat tgg gca aac tat cta acg tcg gaa atg att aag aaa 1008
 Glu Val Arg Asp Trp Ala Asn Tyr Leu Thr Ser Glu Met Ile Lys Lys
 320 325 330 335

ctg gag acg gcc gga aaa ata aat gaa tca gag taa aag cat tta tta 1056
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 340 345 350

tcg tga aat aag aat ctt aca tga aac ttc tga aat ctt aat aat tac 1104
 Ser Asn Lys Asn Leu Thr Asn Phe Asn Leu Asn Asn Tyr
 355 360

tgt gag aaa tcg aac taa ata tct ctt tgt tta tta tcg tat tca ttc 1152
 Cys Glu Lys Ser Asn Ile Ser Leu Cys Leu Leu Ser Tyr Ser Phe
 365 370 375

gta ata aat aat ttc att ttg tta aaa aaa aaa aaa a 1192
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 <213> *Zostera marina*

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 20 25 30

Glu Lys Glu Glu Asp Ser Lys Met Tyr Lys Arg Tyr Arg Glu Ile Val
 35 40 45

Ser Ser Leu Pro Ser Asn Asp Tyr Trp Gly Asp Thr Met Arg Leu Tyr
 50 55 60

Lys Gly Phe Trp Gln Met Gly Tyr Leu Val Pro Gly Ile Met Ala Phe
 65 70 75 80

Glu	Asp	Asn	Phe	Lys	Ala	Arg	Glu	Thr	Asp	Ile	Ile	Leu	Thr	Thr	Leu	
				85			90								95	
Pro	Lys	Ala	Gly	Thr	Thr	Trp	Thr	Lys	Ala	Leu	Thr	Phe	Ala	Ile	Leu	
				100			105				110					
Thr	Arg	Asp	Val	Asn	His	Pro	Ser	Ser	Pro	Thr	His	Pro	Leu	Leu	Phe	
				115			120				125					
Phe	Asn	Pro	His	Ser	Cys	Val	Gln	Asn	Leu	Glu	Tyr	Leu	Tyr	Met	Gly	
				130			135				140					
Arg	Glu	Asn	Thr	Met	Pro	Asp	Leu	Asp	Met	Leu	Asn	Glu	Ser	Pro	Arg	
				145			150				155				160	
Leu	Phe	Ala	Gly	His	Ile	Pro	Tyr	Ser	Leu	Leu	Pro	Ala	Ser	Val	Leu	
				165			170				175					
Lys	Ser	Gly	Thr	Lys	Ile	Ile	Asn	Ile	Ser	Arg	Asn	Arg	Lys	Ser	Thr	
				180			185				190					
Phe	Val	Ser	Phe	Trp	Lys	Phe	Gly	Asn	Leu	Ile	Asn	Pro	Asp	Lys	Leu	
				195			200				205					
Leu	Asp	Leu	Glu	Lys	Ser	Val	Asp	Ile	Phe	Ala	Ser	Gly	Ile	Ser	Phe	
				210			215				220					
Cys	Gly	Pro	Glu	Trp	Asn	Phe	Gln	Ala	Glu	Phe	Thr	Asn	Ala	Ala	Ser	
				225			230				235				240	
Thr	Asn	Ser	Asn	Leu	Leu	Leu	Leu	Ser	Tyr	Glu	Glu	Met	Leu	Glu	Lys	
				245			250				255					
Pro	Val	Glu	Asn	Val	Lys	Lys	Leu	Ala	Glu	Phe	Met	Gly	Cys	Gly	Phe	
				260			265				270					
Thr	Asp	Asp	Glu	Glu	Lys	Gln	Gly	Ile	Val	Asp	Glu	Ile	Val	Lys	Leu	
				275			280				285					
Cys	Ser	Phe	Asp	Asn	Leu	Lys	Asn	Gln	Gln	Val	Asn	Lys	Asn	Gly	Ser	
				290			295				300					
Ser	Tyr	Asn	Ser	Lys	Ile	Asp	Asn	Lys	His	Phe	Phe	Arg	Lys	Gly	Glu	
				305			310				315				320	
Val	Arg	Asp	Trp	Ala	Asn	Tyr	Leu	Thr	Ser	Glu	Met	Ile	Lys	Lys	Leu	
				325			330				335					
Glu	Thr	Ala	Gly	Lys	Ile	Asn	Glu	Ser	Glu	Lys	His	Leu	Leu	Ser	Asn	
				340			345				350					
Lys	Asn	Leu	Thr	Asn	Phe	Asn	Leu	Asn	Asn	Tyr	Cys	Glu	Lys	Ser	Asn	
				355			360				365					
Ile	Ser	Leu	Cys	Leu	Leu	Ser	Tyr	Ser	Phe	Val	Ile	Asn	Asn	Phe	Ile	
				370			375				380					

Leu Leu Lys Lys Lys Lys Lys
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<210> 17
<211> 331
<212> PRT
<213> *Zostera marina*

<400> 17

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Gln	Glu	Lys	Glu	Glu	Asp	Ser	Lys	Met	Tyr	Lys	Arg	Tyr	Arg	Glu	Ile	20	25	30	
Val	Ser	Ser	Leu	Pro	Ser	Asn	Asp	Tyr	Trp	Gly	Asp	Thr	Met	Arg	Leu	35	40	45	
Tyr	Lys	Gly	Phe	Trp	Gln	Met	Gly	Tyr	Leu	Val	Pro	Gly	Ile	Met	Ala	50	55	60	
Phe	Glu	Asp	Asn	Phe	Lys	Ala	Arg	Glu	Thr	Asp	Ile	Ile	Leu	Thr	Thr	65	70	75	80
Leu	Pro	Lys	Ala	Gly	Thr	Thr	Trp	Thr	Lys	Ala	Leu	Thr	Phe	Ala	Ile	85	90	95	
Leu	Thr	Arg	Asp	Val	Asn	His	Pro	Ser	Ser	Pro	Thr	His	Pro	Leu	Leu	100	105	110	
Phe	Phe	Asn	Pro	His	Ser	Cys	Val	Gln	Asn	Leu	Glu	Tyr	Leu	Tyr	Met	115	120	125	
Gly	Arg	Glu	Asn	Thr	Met	Pro	Asp	Leu	Asp	Met	Leu	Asn	Glu	Ser	Pro	130	135	140	
Arg	Leu	Phe	Ala	Gly	His	Ile	Pro	Tyr	Ser	Leu	Leu	Pro	Ala	Ser	Val	145	150	155	160
Leu	Lys	Ser	Gly	Thr	Lys	Ile	Ile	Asn	Ile	Ser	Arg	Asn	Arg	Lys	Ser	165	170	175	
Thr	Phe	Val	Ser	Phe	Trp	Lys	Phe	Gly	Asn	Leu	Ile	Asn	Pro	Asp	Lys	180	185	190	
Leu	Leu	Asp	Leu	Glu	Lys	Ser	Val	Asp	Ile	Phe	Ala	Ser	Gly	Ile	Ser	195	200	205	
Phe	Cys	Gly	Pro	Glu	Trp	Asn	Phe	Gln	Ala	Glu	Phe	Thr	Asn	Ala	Ala	210	215	220	
Ser	Thr	Asn	Ser	Asn	Leu	Leu	Leu	Leu	Ser	Tyr	Glu	Glu	Met	Leu	Glu	225	230	235	240
Lys	Pro	Val	Glu	Asn	Val	Lys	Lys	Leu	Ala	Glu	Phe	Met	Gly	Cys	Gly	245	250	255	

Phe Thr Asp Asp Glu Glu Lys Gln Gly Ile Val Asp Glu Ile Val Lys
 260 265 270

Leu Cys Ser Phe Asp Asn Leu Lys Asn Gln Gln Val Asn Lys Asn Gly
 275 280 285

Ser Ser Tyr Asn Ser Lys Ile Asp Asn Lys His Phe Phe Arg Lys Gly
 290 295 300

Glu Val Arg Asp Trp Ala Asn Tyr Leu Thr Ser Glu Met Ile Lys Lys
 305 310 315 320

Leu Glu Thr Ala Gly Lys Ile Asn Glu Ser Glu
 325 330

<210> 18

<211> 324

<212> PRT

<213> Brassica napus

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 20 25 30

Trp Leu Val Cys Gln Met Tyr Gln Phe Gln Gly Arg Trp His Thr Gln
 35 40 45

Ala Leu Leu Gln Gly Ile Leu Thr Cys Gln Lys His Phe Glu Ala Lys
 50 55 60

Asp Ser Asp Ile Ile Leu Val Thr Asn Pro Lys Ser Gly Thr Thr Trp
 65 70 75 80

Leu Lys Ala Leu Val Phe Ala Leu Ile Asn Arg His Lys Phe Pro Val
 85 90 95

Tyr Ser Val Ile Ile Leu Ser Cys Tyr Gln Ser Ala Leu Leu Val Pro
 100 105 110

Phe Leu Gly Arg Ser Leu Leu Arg Ser Pro Asp Phe Asp Phe Ser Gln
 115 120 125

Leu Ser Ser Pro Arg Leu Met Asn Thr His Ile Ser His Leu Ser Leu
 130 135 140

Pro Glu Ser Val Lys Ser Ser Ser Cys Lys Ile Val Tyr Cys Cys Arg
 145 150 155 160

Asn Pro Lys Asp Met Phe Val Ser Leu Trp His Phe Gly Lys Lys Leu
 165 170 175

Ala Pro Glu Glu Thr Ala Asp Tyr Pro Ile Glu Lys Ala Val Glu Ala
 180 185 190

Phe Cys Gln Gly Lys Phe Ile Gly Gly Pro Phe Trp Asp His Val Leu
 195 200 205
 Glu Tyr Trp Tyr Ala Ser Leu Glu Asn Pro Asn Lys Val Leu Phe Val
 210 215 220
 Ser Tyr Glu Glu Pro Lys Lys Lys Thr Gly Glu Thr Ile Lys Arg Ile
 225 230 235 240
 Ala Glu Phe Leu Gly Cys Gly Leu Val Gly Glu Glu Glu Val Arg Ala
 245 250 255
 Ile Val Lys Leu Cys Ser Phe Glu Ser Leu Ser Ser Leu Glu Val Asn
 260 265 270
 Arg Glu Gly Lys Leu Pro Ser Gly Met Glu Thr Arg Ala Phe Phe Arg
 275 280 285
 Lys Gly Glu Val Gly Gly Trp Arg Asp Thr Leu Thr Glu Ser Leu Ala
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 Lys Phe Ser Cys

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 <213> Arabidopsis thaliana

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 Trp Leu Val Ser Glu Ile Tyr Glu Phe Gln Gly Leu Trp His Thr Gln
 35 40 45
 Ala Ile Leu Gln Gly Ile Leu Ile Cys Gln Lys Arg Phe Glu Ala Lys
 50 55 60
 Asp Ser Asp Ile Ile Leu Val Thr Asn Pro Lys Ser Gly Thr Thr Trp
 65 70 75 80
 Leu Lys Ala Leu Val Phe Ala Leu Leu Asn Arg His Lys Phe Pro Val
 85 90 95
 Ser Ser Ser Gly Asn His Pro Leu Leu Val Thr Asn Pro His Leu Leu
 100 105 110
 Val Pro Phe Leu Glu Gly Val Tyr Tyr Glu Ser Pro Asp Phe Asp Phe
 115 120 125

Ser Ser Leu Pro Ser Pro Arg Leu Met Asn Thr His Ile Ser His Leu
 130 135 140

Ser Leu Pro Glu Ser Val Lys Ser Ser Ser Cys Lys Ile Val Tyr Cys
 145 150 155 160

Cys Arg Asn Pro Lys Asp Met Phe Val Ser Leu Trp His Phe Gly Lys
 165 170 175

Lys Leu Ala Pro Glu Glu Thr Ala Asp Tyr Pro Ile Glu Lys Ala Val
 180 185 190

Glu Ala Phe Cys Glu Gly Lys Phe Ile Gly Gly Pro Phe Trp Asp His
 195 200 205

Ile Leu Glu Tyr Trp Tyr Ala Ser Arg Glu Asn Pro Asn Lys Val Leu
 210 215 220

Phe Val Thr Tyr Glu Glu Leu Lys Lys Gln Thr Glu Val Glu Met Lys
 225 230 235 240

Arg Ile Ala Glu Phe Leu Glu Cys Gly Phe Ile Glu Glu Glu Glu Val
 245 250 255

Arg Glu Ile Val Lys Leu Cys Ser Phe Glu Ser Leu Ser Asn Leu Glu
 260 265 270

Val Asn Lys Glu Gly Lys Leu Pro Asn Gly Ile Glu Thr Lys Thr Phe
 275 280 285

Phe Arg Lys Gly Glu Ile Gly Gly Trp Arg Asp Ser Phe Glu
 290 295 300

<210> 20

<211> 320

<212> PRT

<213> *Flaveria bidentis*

<400> 20

Met Glu Thr Thr Lys Thr Gln Phe Glu Ser Met Ala Glu Met Ile Lys
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Lys Leu Pro Gln His Thr Cys Ser Ser Leu Lys Gly Arg Ile Thr Leu
 20 25 30

Tyr Lys Tyr Gln Asp Phe Trp Gly Leu Gln Asn Asn Ile Glu Gly Ala
 35 40 45

Ile Leu Ala Gln Gln Ser Phe Lys Ala Arg Pro Asp Asp Val Phe Leu
 50 55 60

Cys Ser Tyr Pro Lys Ser Gly Thr Thr Trp Leu Lys Ala Leu Ala Tyr
 65 70 75 80

Ala Ile Val Thr Arg Glu Lys Phe Asp Glu Phe Thr Ser Pro Leu Leu
 85 90 95

Thr Asn Ile Pro His Asn Cys Ile Pro Tyr Ile Glu Lys Asp Leu Lys
 100 105 110
 Lys Ile Val Glu Asn Gln Asn Asn Ser Cys Phe Thr Pro Met Ala Thr
 115 120 125
 His Met Pro Tyr His Val Leu Pro Lys Ser Ile Leu Ala Leu Asn Cys
 130 135 140
 Lys Met Val Tyr Ile Tyr Arg Asn Ile Lys Asp Val Ile Val Ser Phe
 145 150 155 160
 Tyr His Phe Gly Arg Glu Ile Thr Lys Leu Pro Leu Glu Asp Ala Pro
 165 170 175
 Phe Glu Glu Ala Phe Asp Glu Phe Tyr His Gly Ile Ser Gln Phe Gly
 180 185 190
 Pro Tyr Trp Asp His Leu Leu Gly Tyr Trp Lys Ala Ser Leu Glu Arg
 195 200 205
 Pro Glu Val Ile Leu Phe Leu Lys Tyr Glu Asp Val Lys Lys Asp Pro
 210 215 220
 Thr Ser Asn Val Lys Arg Leu Ala Glu Phe Ile Gly Tyr Pro Phe Thr
 225 230 235 240
 Phe Glu Glu Glu Lys Glu Gly Val Ile Glu Ser Ile Ile Lys Leu Cys
 245 250 255
 Ser Phe Glu Asn Leu Ser Asn Leu Glu Val Asn Lys Ser Gly Asn Ser
 260 265 270
 Lys Gly Phe Leu Pro Ile Glu Asn Arg Leu Tyr Phe Arg Lys Ala Lys
 275 280 285
 Asp Gly Asp Trp Lys Asn Tyr Phe Thr Asp Glu Met Thr Glu Lys Ile
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 305 310 315 320

<210> 21

<211> 295

<212> PRT

<213> Homo sapiens

<400> 21

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 20 25 30
 Ser Phe Gln Ala Arg Pro Asp Asp Leu Leu Ile Asn Thr Tyr Pro Lys
 35 40 45

Ser Gly Thr Thr Trp Val Ser Gln Ile Leu Asp Met Ile Tyr Gln Gly
 50 55 60
 Gly Asp Leu Glu Lys Cys Asn Arg Ala Pro Ile Tyr Val Arg Val Pro
 65 70 75 80
 Phe Leu Glu Val Asn Asp Pro Gly Glu Pro Ser Gly Leu Glu Thr Leu
 85 90 95
 Lys Asp Thr Pro Pro Pro Arg Leu Ile Lys Ser His Leu Pro Leu Ala
 100 105 110
 Leu Leu Pro Gln Thr Leu Leu Asp Gln Lys Val Lys Val Val Tyr Val
 115 120 125
 Ala Arg Asn Pro Lys Asp Val Ala Val Ser Tyr Tyr His Phe His Arg
 130 135 140
 Met Glu Lys Ala His Pro Glu Pro Gly Thr Trp Asp Ser Phe Leu Glu
 145 150 155 160
 Lys Phe Met Ala Gly Glu Val Ser Tyr Gly Ser Trp Tyr Gln His Val
 165 170 175
 Gln Glu Trp Trp Glu Leu Ser Arg Thr His Pro Val Leu Tyr Leu Phe
 180 185 190
 Tyr Glu Asp Met Lys Glu Asn Pro Lys Arg Glu Ile Gln Lys Ile Leu
 195 200 205
 Glu Phe Val Gly Arg Ser Leu Pro Glu Glu Thr Met Asp Phe Met Val
 210 215 220
 Gln His Thr Ser Phe Lys Glu Met Lys Lys Asn Pro Met Thr Asn Tyr
 225 230 235 240
 Thr Thr Val Pro Gln Glu Leu Met Asp His Ser Ile Ser Pro Phe Met
 245 250 255
 Arg Lys Gly Met Ala Gly Asp Trp Lys Thr Thr Phe Thr Val Ala Gln
 260 265 270
 Asn Glu Arg Phe Asp Ala Asp Tyr Ala Glu Lys Met Ala Gly Cys Ser
 275 280 285
 Leu Ser Phe Arg Ser Glu Leu
 290 295

<210> 22

<211> 301

<212> DNA

<213> *Zostera marina*

<400> 22

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 cggcaaaaaa ctgacttgta ggaacggatt tagcgacggc tctaaatctg aagaagaatt 120

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ttgctaaggg tcattttccg ttcttaatta ataattagcg acggcttttg atcattgggg 180
acggattctg gccgtcccta aagatcgttt ttctttagt gagggcggta tattaattct 240
ctcttcaatc gtcgaagaaa aacacgtaca tactgaagat ttattttgtg tatatatagg 300
c                                                                    301

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<210> 23
<211> 23
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: Primer

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<220>
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<222> (3)
<223> inosine

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<220>
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<223> inosine

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<220>
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<222> (15)
<223> inosine

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<220>
<221> modified_base
<222> (18)
<223> inosine

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<400> 23
gtngcntggg arscnggnaa rcc

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23

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<210> 24
<211> 26
<212> DNA
<213> Artificial Sequence

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<220>
<223> Description of Artificial Sequence: Primer

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<220>
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<222> (6)
<223> inosine

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<220>
<221> modified_base
<222> (12)
<223> inosine

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<220>
<221> modified_base

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<222> (18)
 <223> inosine

<220>
 <221> modified_base
 <222> (21)
 <223> inosine

<400> 24
 carranatgg tnttyacngt ntaygg

26

<210> 25
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<220>
 <221> modified_base
 <222> (12)
 <223> inosine

<220>
 <221> modified_base
 <222> (15)
 <223> inosine

<220>
 <221> modified_base
 <222> (21)
 <223> inosine

<400> 25
 aarcaycayc cnggncarat ngargc

26

<210> 26
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<220>
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 <222> (9)
 <223> inosine

<220>
 <221> modified_base
 <222> (18)
 <223> inosine

<220>

<221> modified_base
 <222> (21)
 <223> inosine

<400> 26
 tttrtarttnc craaraangt nccytt

26

<210> 27
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<220>
 <221> modified_base
 <222> (3)
 <223> inosine

<220>
 <221> modified_base
 <222> (6)
 <223> inosine

<220>
 <221> modified_base
 <222> (9)
 <223> inosine

<220>
 <221> modified_base
 <222> (18)
 <223> inosine

<220>
 <221> modified_base
 <222> (22)..(23)
 <223> inosine

<400> 27
 ggnarngcna rdatdatncc gnnrca

26

<210> 28
 <211> 24
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Primer

<220>
 <221> modified_base
 <222> (4)
 <223> inosine

<220>
 <221> modified_base
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 <223> inosine

<220>
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 <223> inosine

<220>
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 <222> (19)
 <223> inosine

<220>
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 <223> inosine

<400> 28
 ytcnacytcy ttnggnarna cngc

24

<210> 29
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 29
 Val Ala Trp Glu Ala Pro Gly Lys Pro
 1 5

<210> 30
 <211> 10
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic
 peptide

<400> 30
 Gln Asp Lys Met Val Phe Thr Val Tyr Gly
 1 5 10

<210> 31
 <211> 9
 <212> PRT
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 31

Lys His His Pro Gly Gln Asn Glu Ala
1 5

<210> 32

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 32

Lys Gly Thr Phe Phe Gly Asn Tyr Lys
1 5

<210> 33

<211> 9

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 33

Cys Pro Gly Asn Asn Leu Ala Leu Pro
1 5

<210> 34

<211> 8

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic peptide

<400> 34

Ala Val Leu Pro Lys Glu Val Glu
1 5

<210> 35

<211> 939

<212> DNA

<213> Zostera marina

<220>

<221> CDS

<222> (1)..(939)

<400> 35																	
gtg	gcg	tgg	gaa	ccg	ggg	aaa	cca	ttg	gtt	atg	gag	gaa	gtt	gac	gtc		48
Val	Ala	Trp	Glu	Pro	Gly	Lys	Pro	Leu	Val	Met	Glu	Glu	Val	Asp	Val		
1				5					10					15			
gca cca ccg cag aaa gat gag gtt cgt gtc aag atc aag ttc acg gca																	96
Ala	Pro	Pro	Gln	Lys	Asp	Glu	Val	Arg	Val	Lys	Ile	Lys	Phe	Thr	Ala		
			20					25					30				
ctc tgt cac acc gat gtc ttc ttt tgg gaa gcc aag ggc caa acg ccg																	144
Leu	Cys	His	Thr	Asp	Val	Phe	Phe	Trp	Glu	Ala	Lys	Gly	Gln	Thr	Pro		
		35					40					45					
gtg ttc cct cgt atc ttc ggt cac gag gcc gga ggg att gtg gaa agt																	192
Val	Phe	Pro	Arg	Ile	Phe	Gly	His	Glu	Ala	Gly	Gly	Ile	Val	Glu	Ser		
	50					55					60						
gtc ggg gaa ggc gtg acc gac gtc gtg ccg gga gat cac gtc ctc cca																	240
Val	Gly	Glu	Gly	Val	Thr	Asp	Val	Val	Pro	Gly	Asp	His	Val	Leu	Pro		
65					70				75					80			
gtt ttc act ggg gaa tgt aaa gaa tgc cgc cac tgc aaa tca gaa gag																	288
Val	Phe	Thr	Gly	Glu	Cys	Lys	Glu	Cys	Arg	His	Cys	Lys	Ser	Glu	Glu		
				85				90						95			
agt aat atg tgc gat ctc ctt cga ata aac acc gat cgg ggt gtc atg																	336
Ser	Asn	Met	Cys	Asp	Leu	Leu	Arg	Ile	Asn	Thr	Asp	Arg	Gly	Val	Met		
			100				105					110					
ctc gct gat gga aaa tct aga ttc tcc atc aaa ggc aaa cca atc tac																	384
Leu	Ala	Asp	Gly	Lys	Ser	Arg	Phe	Ser	Ile	Lys	Gly	Lys	Pro	Ile	Tyr		
		115					120					125					
cat ttt gtc gga acc tcc act ttc agt gaa tac act att gtg cat gtt																	432
His	Phe	Val	Gly	Thr	Ser	Thr	Phe	Ser	Glu	Tyr	Thr	Ile	Val	His	Val		
	130					135					140						
ggg tgt ttg gct aag atc aac cct gaa gca cct ctt gac aaa gtt tgc																	480
Gly	Cys	Leu	Ala	Lys	Ile	Asn	Pro	Glu	Ala	Pro	Leu	Asp	Lys	Val	Cys		
145				150					155					160			
att ctt agc tgt gga att tcc acc gga ttt ggc gcg acg gtt aat gtg																	528
Ile	Leu	Ser	Cys	Gly	Ile	Ser	Thr	Gly	Phe	Gly	Ala	Thr	Val	Asn	Val		
				165				170					175				
gca aag ccg acc aaa ggt tct tcc gtc gcc gtc ttc ggc ctg gga gcc																	576
Ala	Lys	Pro	Thr	Lys	Gly	Ser	Ser	Val	Ala	Val	Phe	Gly	Leu	Gly	Ala		
			180				185					190					
gtc ggt ctt tct gct tgt gaa gga gcg agg gtt tct gga gcg gcg aga																	624
Val	Gly	Leu	Ser	Ala	Cys	Glu	Gly	Ala	Arg	Val	Ser	Gly	Ala	Ala	Arg		
		195				200					205						
ata atc ggt atc gac atc aat cct gat aga ttt gaa gaa gct agg aaa																	672
Ile	Ile	Gly	Ile	Asp	Ile	Asn	Pro	Asp	Arg	Phe	Glu	Glu	Ala	Arg	Lys		
210					215						220						

ttc ggg tgc act gat ttt gtg aat cca aag gaa cac acc aaa cct gtt 720
 Phe Gly Cys Thr Asp Phe Val Asn Pro Lys Glu His Thr Lys Pro Val
 225 230 235 240

caa gag gtt att gct gaa atg acc gac ggt gga gta gat cgt tgt ttg 768
 Gln Glu Val Ile Ala Glu Met Thr Asp Gly Gly Val Asp Arg Cys Leu
 245 250 255

gaa tgt act ggt aac atc aac gcc atg att tct gca ttc gaa tgc gtc 816
 Glu Cys Thr Gly Asn Ile Asn Ala Met Ile Ser Ala Phe Glu Cys Val
 260 265 270

cat gat gga tgg ggt gtg gct gtt ctg gtg gga gtt cct cag aaa gat 864
 His Asp Gly Trp Gly Val Ala Val Leu Val Gly Val Pro Gln Lys Asp
 275 280 285

gca gtt ttc aag act cac cca ctg caa ttt ctg agt gaa aaa aca ctc 912
 Ala Val Phe Lys Thr His Pro Leu Gln Phe Leu Ser Glu Lys Thr Leu
 290 295 300

aag ggc acc tta ctt cgg caa cta taa 939
 Lys Gly Thr Leu Leu Arg Gln Leu
 305 310

<210> 36

<211> 312

<212> PRT

<213> *Zostera marina*

<400> 36

Val Ala Trp Glu Pro Gly Lys Pro Leu Val Met Glu Glu Val Asp Val
 1 5 10 15

Ala Pro Pro Gln Lys Asp Glu Val Arg Val Lys Ile Lys Phe Thr Ala
 20 25 30

Leu Cys His Thr Asp Val Phe Phe Trp Glu Ala Lys Gly Gln Thr Pro
 35 40 45

Val Phe Pro Arg Ile Phe Gly His Glu Ala Gly Gly Ile Val Glu Ser
 50 55 60

Val Gly Glu Gly Val Thr Asp Val Val Pro Gly Asp His Val Leu Pro
 65 70 75 80

Val Phe Thr Gly Glu Cys Lys Glu Cys Arg His Cys Lys Ser Glu Glu
 85 90 95

Ser Asn Met Cys Asp Leu Leu Arg Ile Asn Thr Asp Arg Gly Val Met
 100 105 110

Leu Ala Asp Gly Lys Ser Arg Phe Ser Ile Lys Gly Lys Pro Ile Tyr
 115 120 125

His Phe Val Gly Thr Ser Thr Phe Ser Glu Tyr Thr Ile Val His Val
 130 135 140

Gly Cys Leu Ala Lys Ile Asn Pro Glu Ala Pro Leu Asp Lys Val Cys
 145 150 155 160
 Ile Leu Ser Cys Gly Ile Ser Thr Gly Phe Gly Ala Thr Val Asn Val
 165 170 175
 Ala Lys Pro Thr Lys Gly Ser Ser Val Ala Val Phe Gly Leu Gly Ala
 180 185 190
 Val Gly Leu Ser Ala Cys Glu Gly Ala Arg Val Ser Gly Ala Ala Arg
 195 200 205
 Ile Ile Gly Ile Asp Ile Asn Pro Asp Arg Phe Glu Glu Ala Arg Lys
 210 215 220
 Phe Gly Cys Thr Asp Phe Val Asn Pro Lys Glu His Thr Lys Pro Val
 225 230 235 240
 Gln Glu Val Ile Ala Glu Met Thr Asp Gly Gly Val Asp Arg Cys Leu
 245 250 255
 Glu Cys Thr Gly Asn Ile Asn Ala Met Ile Ser Ala Phe Glu Cys Val
 260 265 270
 His Asp Gly Trp Gly Val Ala Val Leu Val Gly Val Pro Gln Lys Asp
 275 280 285
 Ala Val Phe Lys Thr His Pro Leu Gln Phe Leu Ser Glu Lys Thr Leu
 290 295 300
 Lys Gly Thr Leu Leu Arg Gln Leu
 305 310

<210> 37
 <211> 312
 <212> PRT
 <213> *Zostera marina*

<400> 37
 Val Ala Trp Glu Pro Gly Lys Pro Leu Val Met Glu Glu Val Asp Val
 1 5 10 15
 Ala Pro Pro Gln Lys Asp Glu Val Arg Val Lys Ile Lys Phe Thr Ala
 20 25 30
 Leu Cys His Thr Asp Val Phe Phe Trp Glu Ala Lys Gly Gln Thr Pro
 35 40 45
 Val Phe Pro Arg Ile Phe Gly His Glu Ala Gly Gly Ile Val Glu Ser
 50 55 60
 Val Gly Glu Gly Val Thr Asp Val Val Pro Gly Asp His Val Leu Pro
 65 70 75 80
 Val Phe Thr Gly Glu Cys Lys Glu Cys Arg His Cys Lys Ser Glu Glu
 85 90 95

Ser Asn Met Cys Asp Leu Leu Arg Ile Asn Thr Asp Arg Gly Val Met
 100 105 110
 Leu Ala Asp Gly Lys Ser Arg Phe Ser Ile Lys Gly Lys Pro Ile Tyr
 115 120 125
 His Phe Val Gly Thr Ser Thr Phe Ser Glu Tyr Thr Ile Val His Val
 130 135 140
 Gly Cys Leu Ala Lys Ile Asn Pro Glu Ala Pro Leu Asp Lys Val Cys
 145 150 155 160
 Ile Leu Ser Cys Gly Ile Ser Thr Gly Phe Gly Ala Thr Val Asn Val
 165 170 175
 Ala Lys Pro Thr Lys Gly Ser Ser Val Ala Val Phe Gly Leu Gly Ala
 180 185 190
 Val Gly Leu Ser Ala Cys Glu Gly Ala Arg Val Ser Gly Ala Ala Arg
 195 200 205
 Ile Ile Gly Ile Asp Ile Asn Pro Asp Arg Phe Glu Glu Ala Arg Lys
 210 215 220
 Phe Gly Cys Thr Asp Phe Val Asn Pro Lys Glu His Thr Lys Pro Val
 225 230 235 240
 Gln Glu Val Ile Ala Glu Met Thr Asp Gly Gly Val Asp Arg Cys Leu
 245 250 255
 Glu Cys Thr Gly Asn Ile Asn Ala Met Ile Ser Ala Phe Glu Cys Val
 260 265 270
 His Asp Gly Trp Gly Val Ala Val Leu Val Gly Val Pro Gln Lys Asp
 275 280 285
 Ala Val Phe Lys Thr His Pro Leu Gln Phe Leu Ser Glu Lys Thr Leu
 290 295 300
 Lys Gly Thr Leu Leu Arg Gln Leu
 305 310

<210> 38

<211> 379

<212> PRT

<213> Arabidopsis thaliana

<400> 38

Met Ser Thr Thr Gly Gln Ile Ile Arg Cys Lys Ala Ala Val Ala Trp
 1 5 10 15

Glu Ala Gly Lys Pro Leu Val Ile Glu Glu Val Glu Val Ala Pro Pro
 20 25 30

Gln Lys His Glu Val Arg Ile Lys Ile Leu Phe Thr Ser Leu Cys His
 35 40 45

Thr Asp Leu Tyr Phe Trp Glu Ala Lys Gly Gln Thr Pro Leu Phe Pro
 50 55 60
 Arg Ile Phe Gly His Glu Ala Gly Gly Ile Val Glu Ser Val Gly Glu
 65 70 75 80
 Gly Val Thr Asp Leu Gln Pro Gly Asp His Val Leu Pro Ile Phe Thr
 85 90 95
 Gly Glu Cys Gly Glu Cys Arg His Cys His Ser Glu Glu Ser Asn Met
 100 105 110
 Cys Asp Leu Leu Arg Ile Asn Thr Glu Arg Gly Gly Met Ile His Asp
 115 120 125
 Gly Glu Ser Arg Phe Ser Ile Asn Gly Lys Pro Ile Tyr His Phe Leu
 130 135 140
 Gly Thr Ser Thr Phe Ser Glu Tyr Thr Val Val His Ser Gly Gln Val
 145 150 155 160
 Ala Lys Ile Asn Pro Asp Ala Pro Leu Asp Lys Val Cys Ile Val Ser
 165 170 175
 Cys Gly Leu Ser Thr Gly Leu Gly Ala Thr Leu Asn Val Ala Lys Pro
 180 185 190
 Lys Lys Gly Gln Ser Val Ala Ile Phe Gly Leu Gly Ala Val Gly Leu
 195 200 205
 Gly Ala Ala Glu Gly Ala Arg Ile Ala Gly Ala Ser Arg Ile Ile Gly
 210 215 220
 Val Asp Phe Asn Ser Lys Arg Phe Asp Gln Ala Lys Glu Phe Gly Val
 225 230 235 240
 Thr Glu Cys Val Asn Pro Lys Asp His Asp Lys Pro Ile Gln Gln Val
 245 250 255
 Ile Ala Glu Met Thr Asp Gly Gly Val Asp Arg Ser Val Glu Cys Thr
 260 265 270
 Gly Ser Val Gln Ala Met Ile Gln Ala Phe Glu Cys Val His Asp Gly
 275 280 285
 Trp Gly Val Ala Val Leu Val Gly Val Pro Ser Lys Asp Asp Ala Phe
 290 295 300
 Lys Thr His Pro Met Asn Phe Leu Asn Glu Arg Thr Leu Lys Gly Thr
 305 310 315 320
 Phe Phe Gly Asn Tyr Lys Pro Lys Thr Asp Ile Pro Gly Val Val Glu
 325 330 335
 Lys Tyr Met Asn Lys Glu Leu Glu Leu Glu Lys Phe Ile Thr His Thr
 340 345 350

Val Pro Phe Ser Glu Ile Asn Lys Ala Phe Asp Tyr Met Leu Lys Gly
 355 360 365

Glu Ser Ile Arg Cys Ile Ile Thr Met Gly Ala
 370 375

<210> 39
 <211> 379
 <212> PRT
 <213> Zea mays

<400> 39

Met Ala Thr Ala Gly Lys Val Ile Lys Cys Lys Ala Ala Val Ala Trp
 1 5 10 15

Glu Ala Gly Lys Pro Leu Ser Ile Glu Glu Val Glu Val Ala Pro Pro
 20 25 30

Gln Ala Met Glu Val Arg Val Lys Ile Leu Phe Thr Ser Leu Cys His
 35 40 45

Thr Asp Val Tyr Phe Trp Glu Ala Lys Gly Gln Thr Pro Val Phe Pro
 50 55 60

Arg Ile Phe Gly His Glu Ala Gly Gly Ile Ile Glu Ser Val Gly Glu
 65 70 75 80

Gly Val Thr Asp Val Ala Pro Gly Asp His Val Leu Pro Val Phe Thr
 85 90 95

Gly Glu Cys Lys Glu Cys Ala His Cys Lys Ser Ala Glu Ser Asn Met
 100 105 110

Cys Asp Leu Leu Arg Ile Asn Thr Asp Arg Gly Val Met Ile Gly Asp
 115 120 125

Gly Lys Ser Arg Phe Ser Ile Asn Gly Lys Pro Ile Tyr His Phe Val
 130 135 140

Gly Thr Ser Thr Phe Ser Glu Tyr Thr Val Met His Val Gly Cys Val
 145 150 155 160

Ala Lys Ile Asn Pro Gln Ala Pro Leu Asp Lys Val Cys Val Leu Ser
 165 170 175

Cys Gly Ile Ser Thr Gly Leu Gly Ala Ser Ile Asn Val Ala Lys Pro
 180 185 190

Pro Lys Gly Ser Thr Val Ala Val Phe Gly Leu Gly Ala Val Gly Leu
 195 200 205

Ala Ala Ala Glu Gly Ala Arg Ile Ala Gly Ala Ser Arg Ile Ile Gly
 210 215 220

Val Asp Leu Asn Pro Ser Arg Phe Glu Glu Ala Arg Lys Phe Gly Cys
 225 230 235 240

Thr Glu Phe Val Asn Pro Lys Asp His Asn Lys Pro Val Gln Glu Val
 245 250 255
 Leu Ala Glu Met Thr Asn Gly Gly Val Asp Arg Ser Val Glu Cys Thr
 260 265 270
 Gly Asn Ile Asn Ala Met Ile Gln Ala Phe Glu Cys Val His Asp Gly
 275 280 285
 Trp Gly Val Ala Val Leu Val Gly Val Pro His Lys Asp Ala Glu Phe
 290 295 300
 Lys Thr His Pro Met Asn Phe Leu Asn Glu Arg Thr Leu Lys Gly Thr
 305 310 315 320
 Phe Phe Gly Asn Tyr Lys Pro Arg Thr Asp Leu Pro Asn Val Val Glu
 325 330 335
 Leu Tyr Met Lys Lys Glu Leu Glu Val Glu Lys Phe Ile Thr His Ser
 340 345 350
 Val Pro Phe Ala Glu Ile Asn Lys Ala Phe Asn Leu Met Ala Lys Gly
 355 360 365
 Glu Gly Ile Arg Cys Ile Ile Arg Met Glu Asn
 370 375

<210> 40

<211> 369

<212> PRT

<213> Escherichia coli

<400> 40

Met Lys Ser Arg Ala Ala Val Ala Phe Ala Pro Gly Lys Pro Leu Glu
 1 5 10 15
 Ile Val Glu Ile Asp Val Ala Pro Pro Lys Lys Gly Glu Val Leu Ile
 20 25 30
 Lys Val Thr His Thr Gly Val Cys His Thr Asp Ala Phe Thr Leu Ser
 35 40 45
 Gly Asp Asp Pro Glu Gly Val Phe Pro Val Val Leu Gly His Glu Gly
 50 55 60
 Ala Gly Val Val Val Glu Val Gly Glu Gly Val Thr Ser Val Lys Pro
 65 70 75 80
 Gly Asp His Val Ile Pro Leu Tyr Thr Ala Glu Cys Gly Glu Cys Glu
 85 90 95
 Phe Cys Arg Ser Gly Lys Thr Asn Leu Cys Val Ala Val Arg Glu Thr
 100 105 110
 Gln Gly Lys Gly Leu Met Pro Asp Gly Thr Thr Arg Phe Ser Tyr Asn
 115 120 125

Gly	Gln	Pro	Leu	Tyr	His	Tyr	Met	Gly	Cys	Ser	Thr	Phe	Ser	Glu	Tyr
130						135					140				
Thr	Val	Val	Ala	Glu	Val	Ser	Leu	Ala	Lys	Ile	Asn	Pro	Glu	Ala	Asn
145					150					155					160
His	Glu	His	Val	Cys	Leu	Leu	Gly	Cys	Gly	Val	Thr	Thr	Gly	Ile	Gly
				165					170					175	
Ala	Val	His	Asn	Thr	Ala	Lys	Val	Gln	Pro	Gly	Asp	Ser	Val	Ala	Val
			180					185					190		
Phe	Gly	Leu	Gly	Ala	Ile	Gly	Leu	Ala	Val	Val	Gln	Gly	Ala	Arg	Gln
	195						200					205			
Ala	Lys	Ala	Gly	Arg	Ile	Ile	Ala	Ile	Asp	Thr	Asn	Pro	Lys	Lys	Phe
	210					215					220				
Asp	Leu	Ala	Arg	Arg	Phe	Gly	Ala	Thr	Asp	Cys	Ile	Asn	Pro	Asn	Asp
225					230					235					240
Tyr	Asp	Lys	Pro	Ile	Lys	Asp	Val	Leu	Leu	Asp	Ile	Asn	Lys	Trp	Gly
				245					250					255	
Ile	Asp	His	Thr	Phe	Glu	Cys	Ile	Gly	Asn	Val	Asn	Val	Met	Arg	Ala
			260					265					270		
Ala	Leu	Glu	Ser	Ala	His	Arg	Gly	Trp	Gly	Gln	Ser	Val	Ile	Ile	Gly
		275					280					285			
Val	Ala	Val	Ala	Gly	Gln	Glu	Ile	Ser	Thr	Arg	Pro	Phe	Gln	Leu	Val
	290					295					300				
Thr	Gly	Arg	Val	Trp	Lys	Gly	Ser	Ala	Phe	Gly	Gly	Val	Lys	Gly	Arg
305					310					315					320
Ser	Gln	Leu	Pro	Gly	Met	Val	Glu	Asp	Ala	Met	Lys	Gly	Asp	Ile	Asp
				325					330					335	
Leu	Glu	Pro	Phe	Val	Thr	His	Thr	Met	Ser	Leu	Asp	Glu	Ile	Asn	Asp
			340					345					350		
Ala	Phe	Asp	Leu	Met	His	Glu	Gly	Lys	Ser	Ile	Arg	Thr	Val	Ile	Arg
	355						360					365			

Tyr

<210> 41

<211> 1085

<212> DNA

<213> *Zostera marina*

<220>

<221> CDS

<222> (1)..(1083)

<400> 41

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agg atc atg act gtg cct ttt ttc acc aac aag gtc gtc caa cag tac	96
Arg Ile Met Thr Val Pro Phe Phe Thr Asn Lys Val Val Gln Gln Tyr	
20 25 30	
cga ttc gga tgg gag gat gag acg aaa aga gtc gtg gag gat tta gag	144
Arg Phe Gly Trp Glu Asp Glu Thr Lys Arg Val Val Glu Asp Leu Glu	
35 40 45	
gcc aac ccc aaa gcc gcg acg gaa ggg act gtg ctg agg agg agg ttg	192
Ala Asn Pro Lys Ala Ala Thr Glu Gly Thr Val Leu Arg Arg Arg Leu	
50 55 60	
cag ctg atg atg tac aat aat ctg tac aga atc atg ttt gac cgg agg	240
Gln Leu Met Met Tyr Asn Asn Leu Tyr Arg Ile Met Phe Asp Arg Arg	
65 70 75 80	
ttc gag agt gaa gat gat cct ttg ttt ctg aag ctc aag gcg ttg aac	288
Phe Glu Ser Glu Asp Asp Pro Leu Phe Leu Lys Leu Lys Ala Leu Asn	
85 90 95	
ggg gag agg agt aaa ctg gcg cag agc ttc gac tac aac tac gga gat	336
Gly Glu Arg Ser Lys Leu Ala Gln Ser Phe Asp Tyr Asn Tyr Gly Asp	
100 105 110	
ttc atc ccc atc ttg aga cct ttt ctg aaa ggc tac ctt aag aaa tgc	384
Phe Ile Pro Ile Leu Arg Pro Phe Leu Lys Gly Tyr Leu Lys Lys Cys	
115 120 125	
caa gag ttg aag gac aat cga att aag ctg ttt aag gat tac ttc gtc	432
Gln Glu Leu Lys Asp Asn Arg Ile Lys Leu Phe Lys Asp Tyr Phe Val	
130 135 140	
gac gag agg agg aag ttg tta ggt tcg atg acc tcc aag tcg gaa cag	480
Asp Glu Arg Arg Lys Leu Leu Gly Ser Met Thr Ser Lys Ser Glu Gln	
145 150 155 160	
cag aag tgc gcc atc gat cat att ctg gaa gcc gag aag aaa gga gag	528
Gln Lys Cys Ala Ile Asp His Ile Leu Glu Ala Glu Lys Lys Gly Glu	
165 170 175	
atc aat gag gac aac gtc ctg tac atc gtg gag aac atc aac gtc gcc	576
Ile Asn Glu Asp Asn Val Leu Tyr Ile Val Glu Asn Ile Asn Val Ala	
180 185 190	
gcc att gag acg aca cta tgg tcg gtg gag tgg ggg gtg gcg gag ttg	624
Ala Ile Glu Thr Thr Leu Trp Ser Val Glu Trp Gly Val Ala Glu Leu	
195 200 205	
gtg aac cac ccc gaa atc cag aag aaa ctg aga cac gag ttg gac act	672
Val Asn His Pro Glu Ile Gln Lys Lys Leu Arg His Glu Leu Asp Thr	
210 215 220	

gta ctc ggc ccc ggc gta cag gtg acc gaa cca gac acg gcg aag ctt 720
 Val Leu Gly Pro Gly Val Gln Val Thr Glu Pro Asp Thr Ala Lys Leu
 225 230 235 240
 ccg tac ctc caa gct gtc atc aaa gag acc tta cgt ctc cgc atg gca 768
 Pro Tyr Leu Gln Ala Val Ile Lys Glu Thr Leu Arg Leu Arg Met Ala
 245 250 255
 atc cct ctt ttg gtg ccg cac atg aac ctt cac gat gcg aaa ctc gga 816
 Ile Pro Leu Leu Val Pro His Met Asn Leu His Asp Ala Lys Leu Gly
 260 265 270
 agc tac gac atc cct gcc gag agc aag att ctt gtc aac gca tgg ttc 864
 Ser Tyr Asp Ile Pro Ala Glu Ser Lys Ile Leu Val Asn Ala Trp Phe
 275 280 285
 ctg gct aac aat ccg gag aag tgg aag aat ccg gag gag ttc aga ccg 912
 Leu Ala Asn Asn Pro Glu Lys Trp Lys Asn Pro Glu Glu Phe Arg Pro
 290 295 300
 gag agg ttc atg gaa gaa gag tcc aag gtc gaa gct agt ggg aac gac 960
 Glu Arg Phe Met Glu Glu Glu Ser Lys Val Glu Ala Ser Gly Asn Asp
 305 310 315 320
 ttc agg tac ttg cct ttc ggc act gga agg agg agc tgt ccc ggc ata 1008
 Phe Arg Tyr Leu Pro Phe Gly Thr Gly Arg Arg Ser Cys Pro Gly Ile
 325 330 335
 atc ttc gcc ctc cca agg gcg aat tct gca gat atc cat cac act ggc 1056
 Ile Phe Ala Leu Pro Arg Ala Asn Ser Ala Asp Ile His His Thr Gly
 340 345 350
 ggc cgc tcg agc atg cat cta gag ggc cc 1085
 Gly Arg Ser Ser Met His Leu Glu Gly Pro
 355 360

<210> 42

<211> 362

<212> PRT

<213> *Zostera marina*

<400> 42

Gln Glu Met Val Phe Thr Val Tyr Gly Asp His Trp Arg Lys Met Arg
 1 5 10 15
 Arg Ile Met Thr Val Pro Phe Phe Thr Asn Lys Val Val Gln Gln Tyr
 20 25 30
 Arg Phe Gly Trp Glu Asp Glu Thr Lys Arg Val Val Glu Asp Leu Glu
 35 40 45
 Ala Asn Pro Lys Ala Ala Thr Glu Gly Thr Val Leu Arg Arg Arg Leu
 50 55 60
 Gln Leu Met Met Tyr Asn Asn Leu Tyr Arg Ile Met Phe Asp Arg Arg
 65 70 75 80

Phe	Glu	Ser	Glu	Asp	Asp	Pro	Leu	Phe	Leu	Lys	Leu	Lys	Ala	Leu	Asn				
				85						90						95			
Gly	Glu	Arg	Ser	Lys	Leu	Ala	Gln	Ser	Phe	Asp	Tyr	Asn	Tyr	Gly	Asp				
				100						105						110			
Phe	Ile	Pro	Ile	Leu	Arg	Pro	Phe	Leu	Lys	Gly	Tyr	Leu	Lys	Lys	Cys				
				115						120						125			
Gln	Glu	Leu	Lys	Asp	Asn	Arg	Ile	Lys	Leu	Phe	Lys	Asp	Tyr	Phe	Val				
				130						135						140			
Asp	Glu	Arg	Arg	Lys	Leu	Leu	Gly	Ser	Met	Thr	Ser	Lys	Ser	Glu	Gln				
145						150						155						160	
Gln	Lys	Cys	Ala	Ile	Asp	His	Ile	Leu	Glu	Ala	Glu	Lys	Lys	Gly	Glu				
				165						170						175			
Ile	Asn	Glu	Asp	Asn	Val	Leu	Tyr	Ile	Val	Glu	Asn	Ile	Asn	Val	Ala				
				180						185						190			
Ala	Ile	Glu	Thr	Thr	Leu	Trp	Ser	Val	Glu	Trp	Gly	Val	Ala	Glu	Leu				
				195						200						205			
Val	Asn	His	Pro	Glu	Ile	Gln	Lys	Lys	Leu	Arg	His	Glu	Leu	Asp	Thr				
210						215						220							
Val	Leu	Gly	Pro	Gly	Val	Gln	Val	Thr	Glu	Pro	Asp	Thr	Ala	Lys	Leu				
225						230						235						240	
Pro	Tyr	Leu	Gln	Ala	Val	Ile	Lys	Glu	Thr	Leu	Arg	Leu	Arg	Met	Ala				
				245						250						255			
Ile	Pro	Leu	Leu	Val	Pro	His	Met	Asn	Leu	His	Asp	Ala	Lys	Leu	Gly				
				260						265						270			
Ser	Tyr	Asp	Ile	Pro	Ala	Glu	Ser	Lys	Ile	Leu	Val	Asn	Ala	Trp	Phe				
				275						280						285			
Leu	Ala	Asn	Asn	Pro	Glu	Lys	Trp	Lys	Asn	Pro	Glu	Glu	Phe	Arg	Pro				
290						295						300							
Glu	Arg	Phe	Met	Glu	Glu	Glu	Ser	Lys	Val	Glu	Ala	Ser	Gly	Asn	Asp				
305						310						315						320	
Phe	Arg	Tyr	Leu	Pro	Phe	Gly	Thr	Gly	Arg	Arg	Ser	Cys	Pro	Gly	Ile				
				325						330						335			
Ile	Phe	Ala	Leu	Pro	Arg	Ala	Asn	Ser	Ala	Asp	Ile	His	His	Thr	Gly				
				340						345						350			
Gly	Arg	Ser	Ser	Met	His	Leu	Glu	Gly	Pro										
355						360													

$$\begin{array}{ll} \langle 210 \rangle & 43 \\ \langle 211 \rangle & 361 \end{array}$$

<212> PRT

<213> *Zostera marina*

<400> 43

Gln	Glu	Met	Val	Phe	Thr	Val	Tyr	Gly	Asp	His	Trp	Arg	Lys	Met	Arg	1	5	10	15
Arg	Ile	Met	Thr	Val	Pro	Phe	Phe	Thr	Asn	Lys	Val	Val	Gln	Gln	Tyr	20	25	30	
Arg	Phe	Gly	Trp	Glu	Asp	Glu	Thr	Lys	Arg	Val	Val	Glu	Asp	Leu	Glu	35	40	45	
Ala	Asn	Pro	Lys	Ala	Ala	Thr	Glu	Gly	Thr	Val	Leu	Arg	Arg	Arg	Leu	50	55	60	
Gln	Leu	Met	Met	Tyr	Asn	Asn	Leu	Tyr	Arg	Ile	Met	Phe	Asp	Arg	Arg	65	70	75	80
Phe	Glu	Ser	Glu	Asp	Asp	Pro	Leu	Phe	Leu	Lys	Leu	Lys	Ala	Leu	Asn	85	90	95	
Gly	Glu	Arg	Ser	Lys	Leu	Ala	Gln	Ser	Phe	Asp	Tyr	Asn	Tyr	Gly	Asp	100	105	110	
Phe	Ile	Pro	Ile	Leu	Arg	Pro	Phe	Leu	Lys	Gly	Tyr	Leu	Lys	Lys	Cys	115	120	125	
Gln	Glu	Leu	Lys	Asp	Asn	Arg	Ile	Lys	Leu	Phe	Lys	Asp	Tyr	Phe	Val	130	135	140	
Asp	Glu	Arg	Arg	Lys	Leu	Leu	Gly	Ser	Met	Thr	Ser	Lys	Ser	Glu	Gln	145	150	155	160
Gln	Lys	Cys	Ala	Ile	Asp	His	Ile	Leu	Glu	Ala	Glu	Lys	Lys	Gly	Glu	165	170	175	
Ile	Asn	Glu	Asp	Asn	Val	Leu	Tyr	Ile	Val	Glu	Asn	Ile	Asn	Val	Ala	180	185	190	
Ala	Ile	Glu	Thr	Thr	Leu	Trp	Ser	Val	Glu	Trp	Gly	Val	Ala	Glu	Leu	195	200	205	
Val	Asn	His	Pro	Glu	Ile	Gln	Lys	Lys	Leu	Arg	His	Glu	Leu	Asp	Thr	210	215	220	
Val	Leu	Gly	Pro	Gly	Val	Gln	Val	Thr	Glu	Pro	Asp	Thr	Ala	Lys	Leu	225	230	235	240
Pro	Tyr	Leu	Gln	Ala	Val	Ile	Lys	Glu	Thr	Leu	Arg	Leu	Arg	Met	Ala	245	250	255	
Ile	Pro	Leu	Leu	Val	Pro	His	Met	Asn	Leu	His	Asp	Ala	Lys	Leu	Gly	260	265	270	
Ser	Tyr	Asp	Ile	Pro	Ala	Glu	Ser	Lys	Ile	Leu	Val	Asn	Ala	Trp	Phe	275	280	285	

Leu Ala Asn Asn Pro Glu Lys Trp Lys Asn Pro Glu Glu Phe Arg Pro
 290 295 300

Glu Arg Phe Met Glu Glu Glu Ser Lys Val Glu Ala Ser Gly Asn Asp
 305 310 315 320

Phe Arg Tyr Leu Pro Phe Gly Thr Gly Arg Arg Ser Cys Pro Gly Ile
 325 330 335

Ile Phe Ala Leu Pro Arg Ala Asn Ser Ala Asp Ile His His Thr Gly
 340 345 350

Gly Arg Ser Ser Met His Leu Glu Gly
 355 360

<210> 44

<211> 519

<212> PRT

<213> Citrus sinensis

<400> 44

Met Asp Leu Asn Gly Trp Cys Asn Ser Gly Asn Gln Asn Met Cys Cys
 1 5 10 15

Cys Gln Ser Tyr Val Lys Arg Gly Tyr Asp Arg Val Leu Ser Phe Asn
 20 25 30

Gly Leu Ile Thr Val Ser Lys Leu Arg Gly Lys Arg Phe Lys Leu Pro
 35 40 45

Pro Gly Pro Leu Pro Val Pro Val Phe Gly Asn Trp Leu Gln Val Gly
 50 55 60

Asp Asp Leu Asn His Arg Asn Leu Ser Asp Leu Ala Lys Lys Tyr Gly
 65 70 75 80

Asp Val Leu Leu Leu Arg Met Gly Gln Arg Asn Leu Val Val Val Ser
 85 90 95

Ser Pro Asp His Ala Lys Glu Val Leu His Thr Gln Gly Val Glu Phe
 100 105 110

Gly Ser Arg Thr Arg Asn Val Val Phe Asp Ile Phe Thr Gly Lys Gly
 115 120 125

Gln Asp Met Val Phe Thr Val Tyr Gly Glu His Trp Arg Lys Met Arg
 130 135 140

Arg Ile Met Thr Val Pro Phe Phe Thr Asn Lys Val Val Gln Gln Gln
 145 150 155 160

Arg Phe Asn Trp Glu Asp Glu Ala Ala Arg Val Val Glu Asp Val Lys
 165 170 175

Lys Asp Pro Glu Ala Ala Thr Asn Gly Ile Val Leu Arg Arg Arg Leu
 180 185 190

Gln	Leu	Met	Met	Tyr	Asn	Asn	Met	Tyr	Arg	Ile	Met	Phe	Asp	Arg	Arg
		195				200						205			
Phe	Glu	Ser	Gln	Asp	Asp	Pro	Leu	Phe	Asn	Arg	Leu	Lys	Ala	Leu	Asn
		210				215						220			
Gly	Glu	Arg	Ser	Arg	Leu	Ala	Gln	Ser	Phe	Glu	Tyr	Asn	Tyr	Gly	Asp
						230				235				240	
Phe	Ile	Pro	Ile	Leu	Arg	Pro	Phe	Leu	Arg	Gly	Tyr	Leu	Lys	Ile	Cys
				245				250						255	
Lys	Glu	Val	Lys	Glu	Arg	Arg	Leu	Gln	Leu	Phe	Lys	Asp	Tyr	Phe	Val
		260						265				270			
Glu	Glu	Arg	Lys	Lys	Leu	Ala	Ser	Thr	Lys	Ser	Met	Ser	Asn	Glu	Ser
		275				280						285			
Leu	Lys	Cys	Ala	Ile	Asp	His	Ile	Leu	Asp	Ala	Gln	Thr	Lys	Gly	Glu
		290				295				300					
Ile	Asn	Glu	Asp	Asn	Val	Leu	Tyr	Ile	Val	Glu	Asn	Ile	Asn	Val	Ala
305				310						315				320	
Ala	Ile	Glu	Thr	Thr	Leu	Trp	Ser	Ile	Glu	Trp	Gly	Ile	Ala	Glu	Leu
				325				330				335			
Val	Asn	His	Pro	Glu	Ile	Gln	Lys	Lys	Leu	Arg	Asn	Glu	Leu	Asp	Thr
		340						345				350			
Val	Leu	Gly	Pro	Gly	His	Gln	Ile	Thr	Glu	Pro	Asp	Thr	His	Lys	Leu
		355				360						365			
Pro	Tyr	Leu	Gln	Ala	Val	Ile	Lys	Glu	Thr	Leu	Arg	Leu	Arg	Met	Ala
		370				375				380					
Ile	Pro	Leu	Leu	Val	Pro	His	Met	Asn	Leu	His	Asp	Ala	Lys	Leu	Gly
385				390				395				400			
Gly	Tyr	Asp	Val	Pro	Ala	Glu	Ser	Lys	Ile	Leu	Val	Asn	Ala	Trp	Trp
				405				410				415			
Leu	Ala	Asn	Asn	Pro	Ala	Gln	Trp	Lys	Lys	Pro	Glu	Glu	Phe	Arg	Pro
		420						425				430			
Glu	Arg	Phe	Leu	Glu	Glu	Glu	Ser	Lys	Val	Glu	Ala	Asn	Gly	Asn	Asp
		435				440				445					
Phe	Arg	Tyr	Leu	Pro	Phe	Gly	Val	Gly	Arg	Arg	Ser	Cys	Pro	Gly	Ile
		450				455				460					
Ile	Leu	Ala	Leu	Pro	Ile	Leu	Gly	Ile	Thr	Ile	Gly	Arg	Leu	Val	Gln
465				470				475				480			
Asn	Phe	Glu	Leu	Leu	Pro	Pro	Pro	Gly	Gln	Ser	Lys	Ile	Asp	Thr	Ala
		485						490				495			

Glu Lys Gly Gly Gln Phe Ser Leu His Ile Leu Lys His Ser Thr Ile
 500 505 510

Val Ala Lys Pro Arg Ser Phe
 515

<210> 45

<211> 517

<212> PRT

<213> Phaseolus vulgaris

<400> 45

Met Thr Lys Leu Leu His Ser Tyr Phe Ser Ile Pro Phe Ser Pro Phe
 1 5 10 15

Tyr Val Ser Ile Pro Ile Ala Thr Val Leu Phe Val Leu Ile Ile Tyr
 20 25 30

Asn Phe Phe Leu Ala Ser Lys Asn His Ser Ser Thr Pro Pro Gly Pro
 35 40 45

Leu Ser Val Pro Ile Phe Gly Asn Trp Leu Lys Val Gly Asn Asp Leu
 50 55 60

Asn His Arg Val Leu Thr Ser Met Ser Gln Thr Tyr Gly Pro Val Phe
 65 70 75 80

Leu Leu Lys Leu Gly Ser Lys Asn Leu Val Val Val Ser Asp Pro Glu
 85 90 95

Leu Ala Thr Gln Val Leu His Ser Gln Gly Val Glu Phe Gly Ser Arg
 100 105 110

Pro Arg Asn Val Val Phe Asp Ile Phe Thr Gly Lys Gly Gln Lys Met
 115 120 125

Val Phe Thr Val Tyr Gly Glu His Trp Arg Thr Met Arg Thr Ile Met
 130 135 140

Asn Leu Pro Phe Phe Thr Lys Lys Gly Val His Asn Tyr Ser Thr Met
 145 150 155 160

Trp Glu Glu Glu Met Glu Leu Val Val Arg Asp Leu Lys Val Asn Glu
 165 170 175

His Val Arg Ser Glu Gly Ile Val Ile Arg Lys Arg Leu Gln Leu Met
 180 185 190

Leu Tyr Asn Ile Met Tyr Arg Met Met Phe Asp Ala Lys Phe Glu Ser
 195 200 205

Gln Glu Asp Pro Leu Phe Ile Gln Ala Thr Arg Phe Asn Ser Glu Arg
 210 215 220

Ser Arg Leu Ala Gln Ser Phe Glu Tyr Asn Tyr Gly Asp Phe Ile Pro
 225 230 235 240

Leu	Leu	Arg	Pro	Phe	Leu	Arg	Gly	Tyr	Leu	Asn	Lys	Cys	Lys	Asp	Leu	
				245					250					255		
Gln	Ser	Arg	Arg	Leu	Ala	Phe	Phe	Asn	Thr	His	Tyr	Val	Gln	Lys	Arg	
				260					265					270		
Arg	Gln	Ile	Met	Ala	Ala	Asn	Gly	Glu	Lys	His	Lys	Ile	Ser	Cys	Ala	
				275					280					285		
Ile	Asp	His	Ile	Ile	Asp	Ala	Gln	Met	Lys	Gly	Glu	Ile	Ser	Glu	Glu	
				290					295					300		
Asn	Val	Ile	Tyr	Ile	Val	Glu	Asn	Ile	Asn	Val	Ala	Ala	Ile	Glu	Thr	
				305					310					315		
Thr	Leu	Trp	Ser	Met	Glu	Trp	Ala	Ile	Ala	Glu	Leu	Val	Asn	His	Pro	
				325					330					335		
Ser	Val	Gln	Ser	Lys	Ile	Arg	Asp	Glu	Ile	Ser	Glu	Val	Leu	Lys	Gly	
				340					345					350		
Glu	Pro	Val	Thr	Glu	Ser	Asn	Leu	His	Glu	Leu	Pro	Tyr	Leu	Gln	Ala	
				355					360					365		
Thr	Val	Lys	Glu	Thr	Leu	Arg	Leu	His	Thr	Pro	Ile	Leu	Leu	Leu	Val	
				370					375					380		
Pro	His	Met	Asn	Leu	Glu	Glu	Ala	Lys	Leu	Gly	Gly	Tyr	Thr	Val	Pro	
				385					390					395		
Lys	Glu	Ser	Lys	Val	Val	Val	Asn	Ala	Trp	Trp	Leu	Ala	Asn	Asn	Pro	
				405					410					415		
Ser	Trp	Trp	Lys	Asn	Pro	Glu	Glu	Phe	Arg	Pro	Glu	Arg	Phe	Leu	Glu	
				420					425					430		
Glu	Glu	Cys	Ala	Thr	Asp	Ala	Val	Ala	Gly	Gly	Lys	Val	Asp	Phe	Arg	
				435					440					445		
Phe	Val	Pro	Phe	Gly	Val	Gly	Arg	Arg	Ser	Cys	Pro	Gly	Ile	Ile	Leu	
				450					455					460		
Ala	Leu	Pro	Ile	Leu	Gly	Leu	Val	Ile	Ala	Lys	Met	Val	Ser	Asn	Phe	
				465					470					475		
Glu	Ile	Ser	Ala	Pro	Gln	Gly	Thr	Lys	Ile	Asp	Val	Asn	Glu	Lys	Gly	
				485					490					495		
Gly	Gln	Phe	Ser	Leu	His	Ile	Ala	Asn	Tyr	Ser	Thr	Val	Leu	Phe	His	
				500					505					510		
Pro	Ile	Arg	Thr	Gln												
				515												

<210>	46
<211>	912
<212>	DNA

<213> *Zostera marina*

<220>

<221> CDS

<222> (2)..(910)

<400> 46

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a agc atc acc cgg gtc aga tgg agg ccg tcc tcc cca aag aag tcg aaa 49
  Ser Ile Thr Arg Val Arg Trp Arg Pro Ser Ser Pro Lys Lys Ser Lys
    1             5             10             15

cag gac agg tac gct ctt cgg acg tct ccc cag tgg ctg ggt ccg cag 97
Gln Asp Arg Tyr Ala Leu Arg Thr Ser Pro Gln Trp Leu Gly Pro Gln
      20             25             30

gtg gaa gtt att cga gca tcg acc aag tcg ata gag cga gag atc aac 145
Val Glu Val Ile Arg Ala Ser Thr Lys Ser Ile Glu Arg Glu Ile Asn
      35             40             45

tcc gtg aat gac aac cca ctc atc gat gtc tcc cgt aac aag gct ctc 193
Ser Val Asn Asp Asn Pro Leu Ile Asp Val Ser Arg Asn Lys Ala Leu
      50             55             60

cac ggc gga aac ttc caa ggc acg ccc atc gga gta tcc atg gac aac 241
His Gly Gly Asn Phe Gln Gly Thr Pro Ile Gly Val Ser Met Asp Asn
      65             70             75             80

acc cgt ctg gcc atc gct gcc atc ggg aaa ctc atg ttc gcc cag ttc 289
Thr Arg Leu Ala Ile Ala Ala Ile Gly Lys Leu Met Phe Ala Gln Phe
      85             90             95

tcc gag ttg gtg aac gac ttc tac aac aac gga ctt ccg tcg aat cta 337
Ser Glu Leu Val Asn Asp Phe Tyr Asn Asn Gly Leu Pro Ser Asn Leu
      100            105            110

tcc ggt ggc agg aac cca agt ctt gat tac gga ttc aaa ggt gga gaa 385
Ser Gly Gly Arg Asn Pro Ser Leu Asp Tyr Gly Phe Lys Gly Gly Glu
      115            120            125

atc gcc atg gct tcc tat tgt tcc gag ctt cag ttc ctc gca aac cca 433
Ile Ala Met Ala Ser Tyr Cys Ser Glu Leu Gln Phe Leu Ala Asn Pro
      130            135            140

gta acc aac cac gtt caa tcc gcc gag caa cac aac caa gat gta aat 481
Val Thr Asn His Val Gln Ser Ala Glu Gln His Asn Gln Asp Val Asn
      145            150            155            160

tct ctc ggt ctc atc tcc gcc aga aag acg gcg gaa tca atc gag att 529
Ser Leu Gly Leu Ile Ser Ala Arg Lys Thr Ala Glu Ser Ile Glu Ile
      165            170            175

cta aag ctc atg aca tct aca ttc ttg gtt gga atc tgc caa gcc atc 577
Leu Lys Leu Met Thr Ser Thr Phe Leu Val Gly Ile Cys Gln Ala Ile
      180            185            190

gat ctc aga cac atg gaa gaa aac ctt aaa gct tcc gtg aag aac aca 625
Asp Leu Arg His Met Glu Glu Asn Leu Lys Ala Ser Val Lys Asn Thr
      195            200            205

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gtg agt caa gtg gcg aaa cgc gtc ctc acc atg acc gct aac ggt gag 673
Val Ser Gln Val Ala Lys Arg Val Leu Thr Met Thr Ala Asn Gly Glu
210 215 220

ctc cac ccc tcc cgt ttc tgc gag aaa gac ctt ctg aaa gta gtt gac 721
Leu His Pro Ser Arg Phe Cys Glu Lys Asp Leu Leu Lys Val Val Asp
225 230 235 240

agg gag tac gtg ttt tcg tac atc gac gac cca tgc agc gcc act tac 769
Arg Glu Tyr Val Phe Ser Tyr Ile Asp Asp Pro Cys Ser Ala Thr Tyr
245 250 255

cca ctc atg cag aaa ctc cga tcc gta ctc gtc gac cat gct ctg aac 817
Pro Leu Met Gln Lys Leu Arg Ser Val Leu Val Asp His Ala Leu Asn
260 265 270

aac ggt gac aaa gag aaa gac gag gca atg tcg ata ttc cag aag atc 865
Asn Gly Asp Lys Glu Lys Asp Glu Ala Met Ser Ile Phe Gln Lys Ile
275 280 285

gcc gtc ttc gag gag gag ttg att gcc gtc ttc ccc aag gag gtc ga 912
Ala Val Phe Glu Glu Glu Leu Ile Ala Val Phe Pro Lys Glu Val Glu
290 295 300

<210> 47

<211> 304

<212> PRT

<213> *Zostera marina*

<400> 47

Ser Ile Thr Arg Val Arg Trp Arg Pro Ser Ser Pro Lys Lys Ser Lys
1 5 10 15

Gln Asp Arg Tyr Ala Leu Arg Thr Ser Pro Gln Trp Leu Gly Pro Gln
20 25 30

Val Glu Val Ile Arg Ala Ser Thr Lys Ser Ile Glu Arg Glu Ile Asn
35 40 45

Ser Val Asn Asp Asn Pro Leu Ile Asp Val Ser Arg Asn Lys Ala Leu
50 55 60

His Gly Gly Asn Phe Gln Gly Thr Pro Ile Gly Val Ser Met Asp Asn
65 70 75 80

Thr Arg Leu Ala Ile Ala Ala Ile Gly Lys Leu Met Phe Ala Gln Phe
85 90 95

Ser Glu Leu Val Asn Asp Phe Tyr Asn Asn Gly Leu Pro Ser Asn Leu
100 105 110

Ser Gly Gly Arg Asn Pro Ser Leu Asp Tyr Gly Phe Lys Gly Gly Glu
115 120 125

Ile Ala Met Ala Ser Tyr Cys Ser Glu Leu Gln Phe Leu Ala Asn Pro
130 135 140

Val Thr Asn His Val Gln Ser Ala Glu Gln His Asn Gln Asp Val Asn
 145 150 155 160
 Ser Leu Gly Leu Ile Ser Ala Arg Lys Thr Ala Glu Ser Ile Glu Ile
 165 170 175
 Leu Lys Leu Met Thr Ser Thr Phe Leu Val Gly Ile Cys Gln Ala Ile
 180 185 190
 Asp Leu Arg His Met Glu Glu Asn Leu Lys Ala Ser Val Lys Asn Thr
 195 200 205
 Val Ser Gln Val Ala Lys Arg Val Leu Thr Met Thr Ala Asn Gly Glu
 210 215 220
 Leu His Pro Ser Arg Phe Cys Glu Lys Asp Leu Leu Lys Val Val Asp
 225 230 235 240
 Arg Glu Tyr Val Phe Ser Tyr Ile Asp Asp Pro Cys Ser Ala Thr Tyr
 245 250 255
 Pro Leu Met Gln Lys Leu Arg Ser Val Leu Val Asp His Ala Leu Asn
 260 265 270
 Asn Gly Asp Lys Glu Lys Asp Glu Ala Met Ser Ile Phe Gln Lys Ile
 275 280 285
 Ala Val Phe Glu Glu Glu Leu Ile Ala Val Phe Pro Lys Glu Val Glu
 290 295 300

<210> 48
 <211> 303
 <212> PRT
 <213> *Zostera marina*

<400> 48
 Ser Ile Thr Arg Val Arg Trp Arg Pro Ser Ser Pro Lys Lys Ser Lys
 1 5 10 15
 Gln Asp Arg Tyr Ala Leu Arg Thr Ser Pro Gln Trp Leu Gly Pro Gln
 20 25 30
 Val Glu Val Ile Arg Ala Ser Thr Lys Ser Ile Glu Arg Glu Ile Asn
 35 40 45
 Ser Val Asn Asp Asn Pro Leu Ile Asp Val Ser Arg Asn Lys Ala Leu
 50 55 60
 His Gly Gly Asn Phe Gln Gly Thr Pro Ile Gly Val Ser Met Asp Asn
 65 70 75 80
 Thr Arg Leu Ala Ile Ala Ala Ile Gly Lys Leu Met Phe Ala Gln Phe
 85 90 95

Ser Glu Leu Val Asn Asp Phe Tyr Asn Asn Gly Leu Pro Ser Asn Leu
 100 105 110
 Ser Gly Gly Arg Asn Pro Ser Leu Asp Tyr Gly Phe Lys Gly Gly Glu
 115 120 125
 Ile Ala Met Ala Ser Tyr Cys Ser Glu Leu Gln Phe Leu Ala Asn Pro
 130 135 140
 Val Thr Asn His Val Gln Ser Ala Glu Gln His Asn Gln Asp Val Asn
 145 150 155 160
 Ser Leu Gly Leu Ile Ser Ala Arg Lys Thr Ala Glu Ser Ile Glu Ile
 165 170 175
 Leu Lys Leu Met Thr Ser Thr Phe Leu Val Gly Ile Cys Gln Ala Ile
 180 185 190
 Asp Leu Arg His Met Glu Glu Asn Leu Lys Ala Ser Val Lys Asn Thr
 195 200 205
 Val Ser Gln Val Ala Lys Arg Val Leu Thr Met Thr Ala Asn Gly Glu
 210 215 220
 Leu His Pro Ser Arg Phe Cys Glu Lys Asp Leu Leu Lys Val Val Asp
 225 230 235 240
 Arg Glu Tyr Val Phe Ser Tyr Ile Asp Asp Pro Cys Ser Ala Thr Tyr
 245 250 255
 Pro Leu Met Gln Lys Leu Arg Ser Val Leu Val Asp His Ala Leu Asn
 260 265 270
 Asn Gly Asp Lys Glu Lys Asp Glu Ala Met Ser Ile Phe Gln Lys Ile
 275 280 285
 Ala Val Phe Glu Glu Glu Leu Ile Ala Val Phe Pro Lys Glu Val
 290 295 300

<210> 49

<211> 717

<212> PRT

<213> Arabidopsis thaliana

<400> 49

Met Asp Gln Ile Glu Ala Met Leu Cys Gly Gly Gly Glu Lys Thr Lys
 1 5 10 15
 Val Ala Val Thr Thr Lys Thr Leu Ala Asp Pro Leu Asn Trp Gly Leu
 20 25 30
 Ala Ala Asp Gln Met Lys Gly Ser His Leu Asp Glu Val Lys Lys Met
 35 40 45
 Val Glu Glu Tyr Arg Arg Pro Val Val Asn Leu Gly Gly Glu Thr Leu
 50 55 60

Thr	Ile	Gly	Gln	Val	Ala	Ala	Ile	Ser	Thr	Val	Gly	Gly	Ser	Val	Lys	65	70	75	80
Val	Glu	Leu	Ala	Glu	Thr	Ser	Arg	Ala	Gly	Val	Lys	Ala	Ser	Ser	Asp	85	90	95	
Trp	Val	Met	Glu	Ser	Met	Asn	Lys	Gly	Thr	Asp	Ser	Tyr	Gly	Val	Thr	100	105	110	
Thr	Gly	Phe	Gly	Ala	Thr	Ser	His	Arg	Arg	Thr	Lys	Asn	Gly	Thr	Ala	115	120	125	
Leu	Gln	Thr	Glu	Leu	Ile	Arg	Phe	Leu	Asn	Ala	Gly	Ile	Phe	Gly	Asn	130	135	140	
Thr	Lys	Glu	Thr	Cys	His	Thr	Leu	Pro	Gln	Ser	Ala	Thr	Arg	Ala	Ala	145	150	155	160
Met	Leu	Val	Arg	Val	Asn	Thr	Leu	Leu	Gln	Gly	Tyr	Ser	Gly	Ile	Arg	165	170	175	
Phe	Glu	Ile	Leu	Glu	Ala	Ile	Thr	Ser	Leu	Leu	Asn	His	Asn	Ile	Ser	180	185	190	
Pro	Ser	Leu	Pro	Leu	Arg	Gly	Thr	Ile	Thr	Ala	Ser	Gly	His	Leu	Val	195	200	205	
Pro	Leu	Ser	Tyr	Ile	Ala	Gly	Leu	Leu	Thr	Gly	Arg	Pro	Asn	Ser	Lys	210	215	220	
Ala	Thr	Gly	Pro	Asp	Gly	Glu	Ser	Leu	Thr	Glu	Lys	Glu	Ala	Phe	Glu	225	230	235	240
Lys	Ala	Gly	Ile	Ser	Thr	Gly	Phe	Phe	Asp	Leu	Gln	Pro	Lys	Glu	Gly	245	250	255	
Leu	Ala	Leu	Val	Asn	Gly	Thr	Ala	Val	Gly	Ser	Gly	Met	Ala	Ser	Met	260	265	270	
Val	Leu	Phe	Glu	Ala	Asn	Val	Gln	Ala	Val	Leu	Ala	Glu	Val	Leu	Ser	275	280	285	
Ala	Ile	Phe	Ala	Glu	Val	Met	Ser	Gly	Lys	Pro	Glu	Phe	Thr	Asp	His	290	295	300	
Leu	Thr	His	Arg	Leu	Lys	His	His	Pro	Gly	Gln	Ile	Glu	Ala	Ala	Ala	305	310	315	320
Ile	Met	Glu	His	Ile	Leu	Asp	Gly	Ser	Ser	Tyr	Met	Lys	Leu	Ala	Gln	325	330	335	
Lys	Val	His	Glu	Met	Asp	Pro	Leu	Gln	Lys	Pro	Lys	Gln	Asp	Arg	Tyr	340	345	350	
Ala	Leu	Arg	Thr	Ser	Pro	Gln	Trp	Leu	Gly	Pro	Gln	Ile	Glu	Val	Ile	355	360	365	

Arg	Gln	Ala	Thr	Lys	Ser	Ile	Glu	Arg	Glu	Ile	Asn	Ser	Val	Asn	Asp		
370						375					380						
Asn	Pro	Leu	Ile	Asp	Val	Ser	Arg	Asn	Lys	Ala	Ile	His	Gly	Gly	Asn		
385					390					395					400		
Phe	Gln	Gly	Thr	Pro	Ile	Gly	Val	Ser	Met	Asp	Asn	Thr	Arg	Leu	Ala		
				405					410					415			
Ile	Ala	Ala	Ile	Gly	Lys	Leu	Met	Phe	Ala	Gln	Phe	Ser	Glu	Leu	Val		
			420					425					430				
Asn	Asp	Phe	Tyr	Asn	Asn	Gly	Leu	Pro	Ser	Asn	Leu	Thr	Ala	Ser	Ser		
		435					440					445					
Asn	Pro	Ser	Leu	Asp	Tyr	Gly	Phe	Lys	Gly	Ala	Glu	Ile	Ala	Met	Ala		
	450					455					460						
Ser	Tyr	Cys	Ser	Glu	Leu	Gln	Tyr	Leu	Ala	Asn	Pro	Val	Thr	Ser	His		
465					470					475					480		
Val	Gln	Ser	Ala	Glu	Gln	His	Asn	Gln	Asp	Val	Asn	Ser	Leu	Gly	Leu		
				485					490					495			
Ile	Ser	Ser	Arg	Lys	Thr	Ser	Glu	Ala	Val	Asp	Ile	Leu	Lys	Leu	Met		
			500					505					510				
Ser	Thr	Thr	Phe	Leu	Val	Gly	Ile	Cys	Gln	Ala	Val	Asp	Leu	Arg	His		
		515					520					525					
Leu	Glu	Glu	Asn	Leu	Arg	Gln	Thr	Val	Lys	Asn	Thr	Val	Ser	Gln	Val		
	530					535					540						
Ala	Lys	Lys	Val	Leu	Thr	Thr	Gly	Ile	Asn	Gly	Glu	Leu	His	Pro	Ser		
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Arg	Phe	Cys	Glu	Lys	Asp	Leu	Leu	Lys	Val	Val	Asp	Arg	Glu	Gln	Val		
				565					570					575			
Phe	Thr	Tyr	Val	Asp	Asp	Pro	Cys	Ser	Ala	Thr	Tyr	Pro	Leu	Met	Gln		
			580					585					590				
Arg	Leu	Arg	Gln	Val	Ile	Val	Asp	His	Ala	Leu	Ser	Asn	Gly	Glu	Thr		
		595					600					605					
Glu	Lys	Asn	Ala	Val	Thr	Ser	Ile	Phe	Gln	Lys	Ile	Gly	Ala	Phe	Glu		
	610					615					620						
Glu	Glu	Leu	Lys	Ala	Val	Leu	Pro	Lys	Glu	Val	Glu	Ala	Ala	Arg	Ala		
625					630					635					640		
Ala	Tyr	Gly	Asn	Gly	Thr	Ala	Pro	Ile	Pro	Asn	Arg	Ile	Lys	Glu	Cys		
			645					650					655				
Arg	Ser	Tyr	Pro	Leu	Tyr	Arg	Phe	Val	Arg	Glu	Glu	Leu	Gly	Thr	Lys		
			660					665					670				

Leu Leu Thr Gly Glu Lys Val Val Ser Pro Gly Glu Glu Phe Asp Lys
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Val Phe Thr Ala Met Cys Glu Gly Lys Leu Ile Asp Pro Leu Met Asp
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Cys Leu Lys Glu Trp Asn Gly Ala Pro Ile Pro Ile Cys
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Arg Met Val Glu Glu Tyr Arg Lys Pro Val Val Thr Met Glu Gly Ala
 35 40 45

Thr Thr Ile Ala Met Val Ala Ala Val Ala Ala Gly Ser Asp Thr Arg
 50 55 60

Val Glu Ile Asp Glu Ser Ala Arg Gly Arg Val Lys Glu Ser Ser Asp
 65 70 75 80

Trp Val Met Asn Ser Met Met Asn Gly Thr Asp Ser Tyr Gly Val Thr
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Thr Gly Phe Gly Ala Thr Ser His Arg Arg Thr Lys Glu Gly Gly Ala
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Leu Gln Arg Glu Leu Ile Arg Phe Leu Asn Ala Gly Ala Phe Gly Thr
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Gly Thr Asp Gly His Val Leu Pro Ala Ala Ala Thr Arg Ala Ala Met
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Leu Val Arg Val Asn Thr Leu Leu Gln Gly Tyr Ser Gly Ile Arg Phe
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Glu Ile Leu Glu Thr Ile Ala Thr Leu Leu Asn Ala Asn Val Thr Pro
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Cys Leu Pro Leu Arg Gly Thr Ile Thr Ala Ser Gly Asp Leu Val Pro
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Leu Ser Tyr Ile Ala Gly Leu Val Thr Gly Arg Pro Asn Ser Met Ala
 195 200 205

Thr Ala Pro Asp Gly Ser Lys Val Asn Ala Ala Glu Ala Phe Lys Ile
 210 215 220

Ala	Gly	Ile	Gln	His	Gly	Phe	Phe	Glu	Leu	Gln	Pro	Lys	Glu	Gly	Leu	225	230	235	240
Ala	Met	Val	Asn	Gly	Thr	Ala	Val	Gly	Ser	Gly	Leu	Ala	Ser	Met	Val	245	250	255	
Leu	Phe	Glu	Ala	Asn	Val	Leu	Ser	Leu	Leu	Ala	Glu	Val	Leu	Ser	Gly	260	265	270	
Val	Phe	Cys	Glu	Val	Met	Asn	Gly	Lys	Pro	Glu	Phe	Thr	Asp	His	Leu	275	280	285	
Thr	His	Lys	Leu	Lys	His	His	Pro	Gly	Gln	Ile	Glu	Ala	Ala	Ala	Ile	290	295	300	
Met	Glu	His	Ile	Leu	Glu	Gly	Ser	Ser	Tyr	Met	Met	Leu	Ala	Lys	Lys	305	310	315	320
Leu	Gly	Glu	Leu	Asp	Pro	Leu	Met	Lys	Pro	Lys	Gln	Asp	Arg	Tyr	Ala	325	330	335	
Leu	Arg	Thr	Ser	Pro	Gln	Trp	Leu	Gly	Pro	Gln	Ile	Glu	Val	Ile	Arg	340	345	350	
Ala	Ala	Thr	Lys	Ser	Ile	Glu	Arg	Glu	Ile	Asn	Ser	Val	Asn	Asp	Asn	355	360	365	
Pro	Leu	Ile	Asp	Val	Ser	Arg	Gly	Lys	Ala	Ile	His	Gly	Gly	Asn	Phe	370	375	380	
Gln	Gly	Thr	Pro	Ile	Gly	Val	Ser	Met	Asp	Asn	Thr	Arg	Leu	Ala	Ile	385	390	395	400
Ala	Ala	Ile	Gly	Lys	Leu	Met	Phe	Ala	Gln	Phe	Ser	Glu	Leu	Val	Asn	405	410	415	
Asp	Phe	Tyr	Asn	Asn	Gly	Leu	Pro	Ser	Asn	Leu	Ser	Gly	Gly	Arg	Asn	420	425	430	
Pro	Ser	Leu	Asp	Tyr	Gly	Phe	Lys	Gly	Ala	Glu	Ile	Ala	Met	Ala	Ser	435	440	445	
Tyr	Cys	Ser	Glu	Leu	Gln	Phe	Leu	Gly	Asn	Pro	Val	Thr	Asn	His	Val	450	455	460	
Gln	Ser	Ala	Glu	Gln	His	Asn	Gln	Asp	Val	Asn	Ser	Leu	Gly	Leu	Ile	465	470	475	480
Ser	Ser	Arg	Lys	Thr	Ala	Glu	Ala	Ile	Asp	Ile	Leu	Lys	Leu	Met	Ser	485	490	495	
Ser	Thr	Phe	Leu	Val	Ala	Leu	Cys	Gln	Ala	Ile	Asp	Leu	Arg	His	Leu	500	505	510	
Glu	Glu	Asn	Val	Lys	Asn	Ala	Val	Lys	Ser	Cys	Val	Lys	Thr	Val	Ala	515	520	525	

Arg Lys Thr Leu Ser Thr Asp Asn Asn Gly His Leu His Asn Ala Arg
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 Phe Cys Glu Lys Asp Leu Leu Leu Thr Ile Asp Arg Glu Ala Val Phe
 545 550 555 560
 Ala Tyr Ala Asp Asp Pro Cys Ser Ala Asn Tyr Pro Leu Met Gln Lys
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 Met Arg Ala Val Leu Val Glu His Ala Leu Ala Asn Gly Glu Ala Glu
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 Ala His Val Glu Thr Ser Val Phe Ala Lys Leu Ala Met Phe Glu Gln
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 Val Glu Asn Gly Thr Ala Ala Gln Gln Asn Arg Ile Ala Glu Cys Arg
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 Ser Tyr Pro Leu Tyr Arg Phe Val Arg Lys Glu Leu Gly Thr Glu Tyr
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